

COURSE GUIDE – short form

Academic year 2021-2022

Course name ¹	Elements of industrial electronics					Course code	4ISI01DI D		
Course type ²	DID	Category ³	DI	Year of study	4	Semester	7	Number of credit points	5

Faculty	Materials Science and Engineering	Number of teaching and learning hours ⁴					
Field	Industrial Engineering	Total	L	T	LB	P	IS
Specialization	Security Engineering in Industry	70	28	1	14	-	28

Pre-requisites from the curriculum ⁵	Compulsory	-
	Recommended	Electrotechnics

General objective ⁶	Acknowledgement and appropriate use of theoretical concepts and practical elements of industrial electronics
Specific objectives ⁷	Acquiring theoretical knowledge on semiconductor devices, amplifiers and the main types of electrical filters.
Course description ⁸	<ol style="list-style-type: none"> 1. Semiconductor devices 2. Operational amplifiers 3. Electrical filters 4. Voltage rectifiers 5. Inverters 6. Voltage variators 7. Standardization in industrial electronics 8. Protection and signaling circuits. Online demonstrative applications. 9. Sensors and transducers

Assessment		Schedule ⁹	Percentage of the final grade (minimum grade) ¹⁰
Continuous assessment	Class tests along the semester		
	Activity during tutorials/laboratory works/projects/practical work	Weeks 1 to 14	40%
	Assignments		%
Final assessment	Final assessment form ¹¹	Written test	60%
	Examination procedures and conditions: 1. Solving of theoretical subjects; written test; 60%.		

Course organizer	Silviu Ursache, Lecturer Ph.D.
Teaching assistants	Silviu Ursache, Lecturer Ph.D.

¹Course name from the curriculum

² DF – fundamental, DID – in the field, DS – specialty, DC – complementary (from the curriculum)

³ DI – imposed, DO – optional, DL – facultative (from the curriculum)

⁴ Points 3.8, 3.5, 3.6a,b,c, 3.7 from the Course guide – extended form (L-lecture, T-tutorial, LB-laboratory works, P-project, IS-individual study)

⁵ According to 4.1 – Pre-requisites - from the Course guide – extended form

⁶ According to 7.1 from the Course guide – extended form

⁷ According to 7.2 from the Course guide – extended form

⁸ Short description of the course, according to point 8 from the Course guide – extended form

⁹ For continuous assessment: weeks 1 – 14, for final assessment – colloquium: week 14, for final assessment-exam: exam period

¹⁰ A minimum grade might be imposed for some assessment stages

¹¹ Exam or colloquium